



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12118

Entry Year 2017

Acreage: 1,692

County Iron

Management Area: Amasa Plains

Revision Date: 2015-08-18

Stand Examiner: Ed Rice

Legal Description:

T46N R32W sec 6, 21, 22 T45N R32W sec 4, 8, 9, 17, 18

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Continue to sustainably balance the aspen age class acres. Attempt to promote diversity in conifer species to minimize future spruce budworm impacts. Protect the riparian areas and transition zones during management activity.

Soil and topography:

Stoney/sandy complex loams with sandy loam soil interspersed throughout. The bog and lowland areas consist of black much soils.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

Within the compartment the ownership is contiguous state land. Surrounding the compartment are large blocks of industrial forest lands (CFA) and smaller parcels of non industrial private landowners. Timber management has been ongoing throughout the area.

Unique Natural Features:

Loon on Deer Lake.

Archeological, Historical, and Cultural Features:

None recorded

Special Management Designations or Considerations:

None identified

Watershed and Fisheries Considerations:

Deer River is a cold water trout stream. Bone Lake and a portion of Deer Lake are also in this compartment. Minimum buffers for lakes are 100 feet plus 5 feet per 1% increase of slope. Trout streams require a 300 foot buffer where aspen management is involved. Streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function. Additionally, wetlands and open waters in riparian areas and floodplains are physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality. These systems act as effective buffers to protect downstream waters from pollution and are essential components of river food webs. BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

Wildlife Habitat Considerations:

This compartment is primarily important as a north-south corridor between Shank Lake Deeryard and the Deer Lake Deeryard. This area historically held an abundance of deer that the heavily cut deeryard to the east used to hold. Much of the compartment is relatively young aspen, which is suitable for featured species grouse, deer, woodcock and bear. Lowlands are suitable habitat for snowshoes, bobcat, fisher, beaver, muskrat and otter. Current winter deer use is very limited.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured till and glacial outwash sand and gravel and post-glacial alluvium. There is insufficient data to determine the glacial drift thickness (greater than 100 feet in places). Intrusive igneous rocks and the Proterozoic Hemlock Formation underlie the glacial drift. The Hemlock does not have a current economic use. Abandoned iron mines are located six miles to the southwest, part of the Western Menominee Iron Range. This compartment was previously leased for metallic exploration and potential may exist. The nearest gravel pit is one mile to the north, but there should be some potential in the compartment. There is no economic oil and gas production in the UP.

Vehicle Access:

Good to fair, the Deer Lake Road runs through the middle of the compartment and is an improved gravel road.

Survey Needs:

T46N R32W
E 1/16 sec 21
E 1/16 sec 21, 28
T45N R32W
S 1/16 sec 4, 5
S 1/16 sec 8, 9
NW 1/16 sec 8
W 1/16 sec 8
SE 1/16 sec 17
E 1/16 sec 17
W 1/16 sec 17
N 1/16 sec 16, 17

Recreational Facilities and Opportunities:

Deer Lake Campground

Fire Protection:

Much of this compartment holds an extremely heavy spruce/fir component. This high fuel loading combined with recent spruce budworm lends to potential for a large fire. Given the alignment of weather conditions and fuel, a fire on such a day will pose extremely problematic to control efforts. For the uplands, access is generally good, however there are large expanses of bog that would pose access problems. Water sources are plentiful.

Additional Compartment Information:

The following reports from the Inventory are attached:

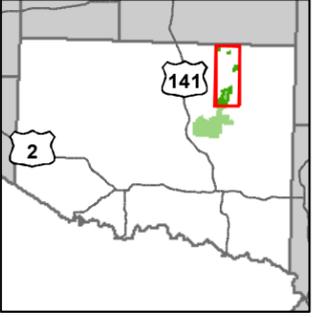
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

The following information is displayed, where pertinent, on the attached compartment maps:

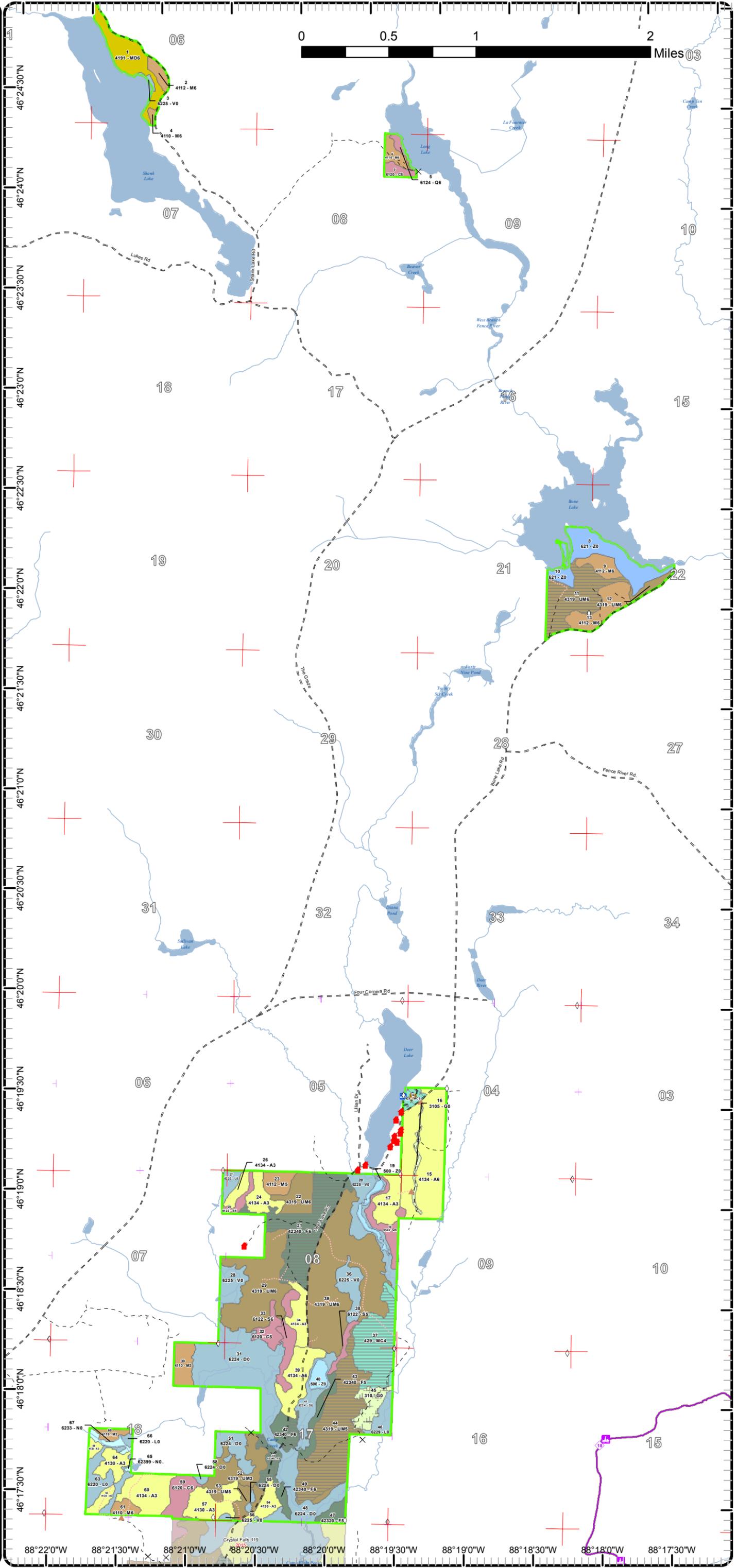
Base feature information, stand boundaries, cover types, and numbers
Proposed treatments
Site condition boundaries
Details on the road access system

Cover Type & Treatments

Compartment: 118
 T45NR32W 04,08-09,17-18
 T46NR32W 21-22,06,08
 County: Iron
 Unit: Crystal Falls
 Mgmt Area: Amasa Plains
 YOE: 2017
 Acres: 1692 GIS Calculated
 Examiner: Ed Rice
 Map Revised: 8/28/2015
 Map Phase: Pre-Review



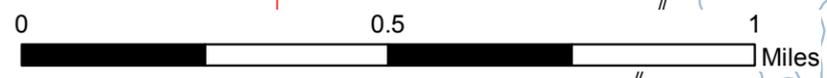
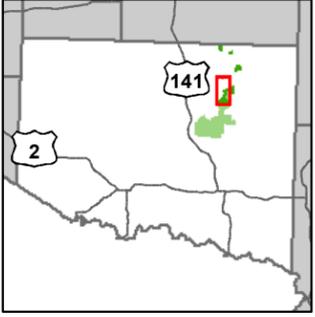
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- ◇ Field Grade GPS Corners
- Miris Corners
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- ⋯ Closed Roads
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- × Gate
- ▲ Berms
- ⊡ Boating Access Site
- ⊡ Campground
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- ▭ Other Treatment - See Comments
- ⊡ Salvage
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- 500 - Water
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- 622 - Lowland Shrub
- 623 - Emergent Wetland



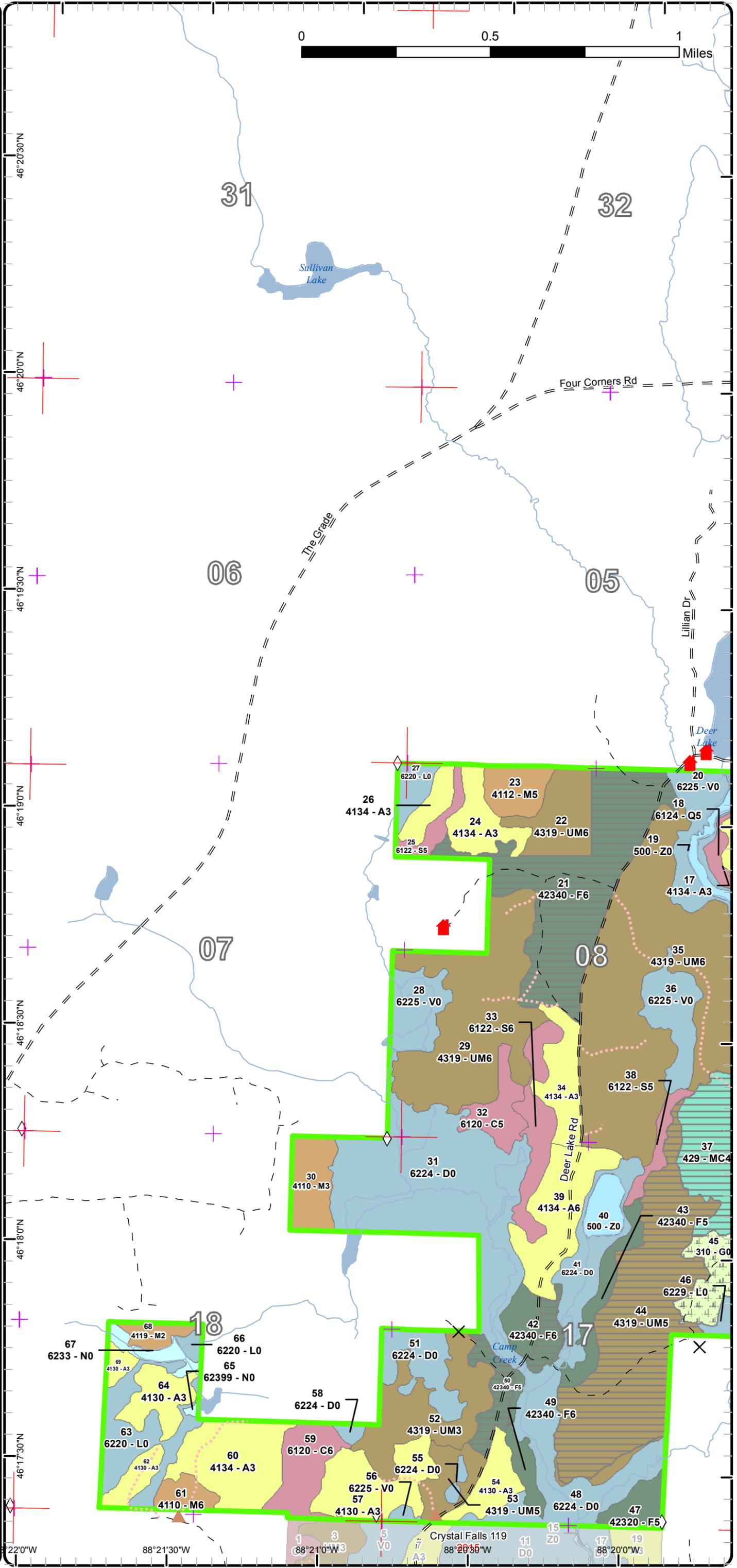
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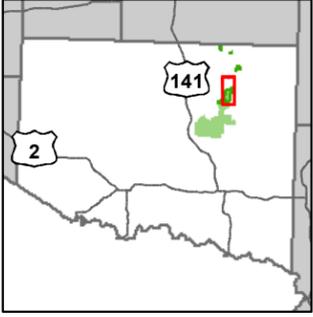


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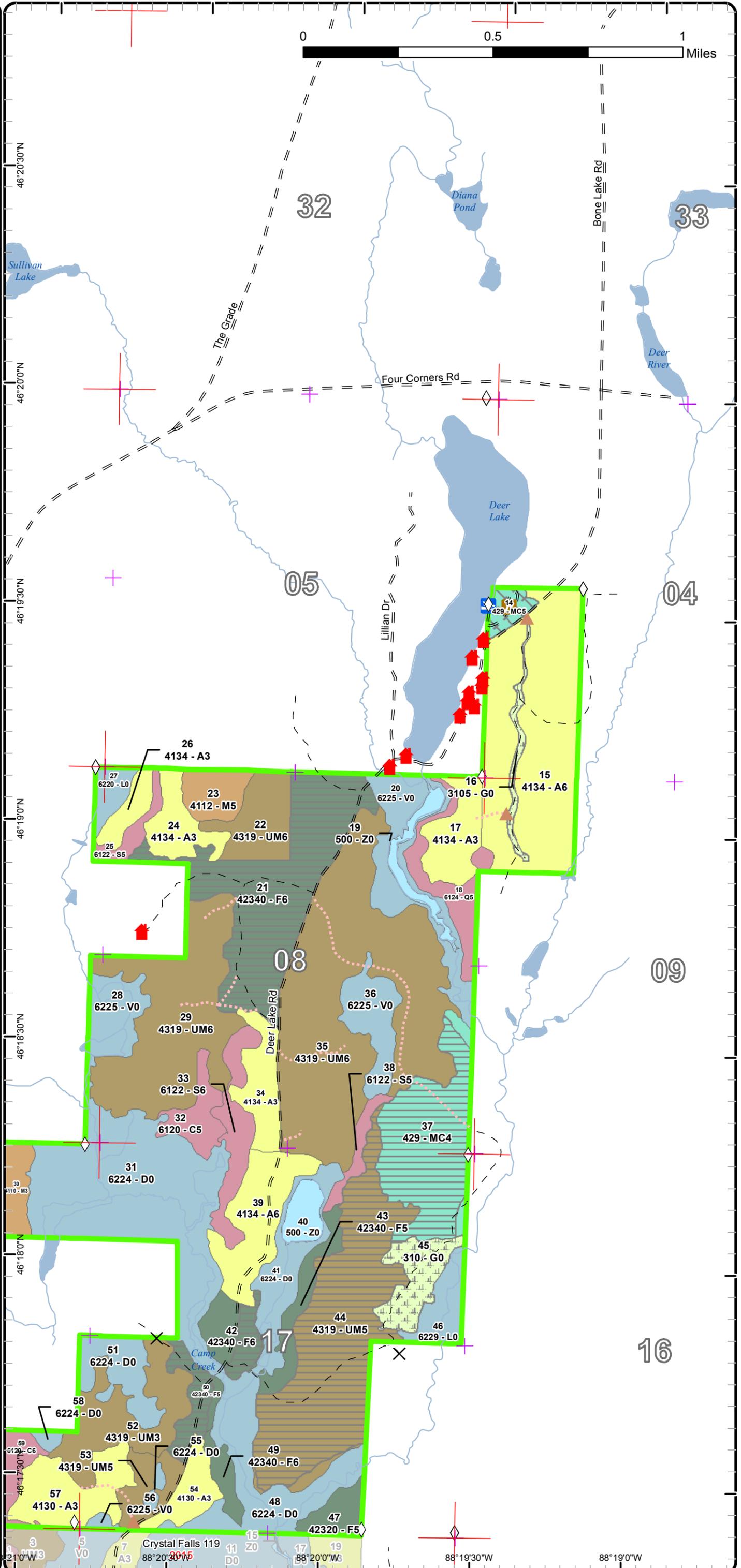


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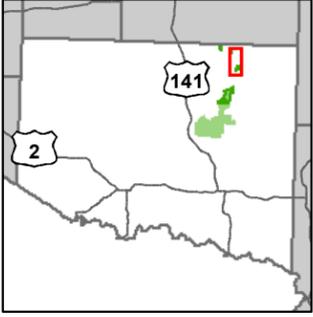


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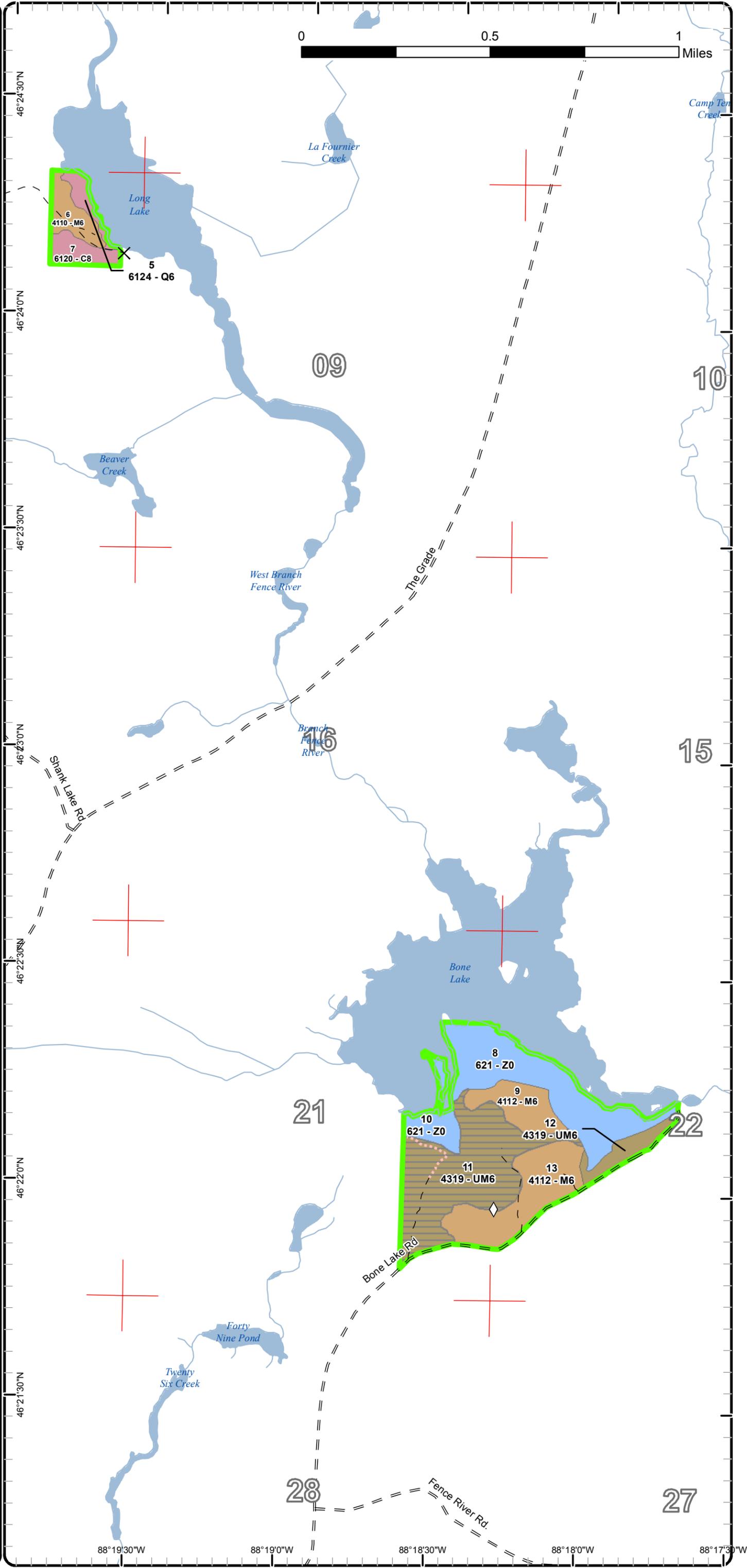


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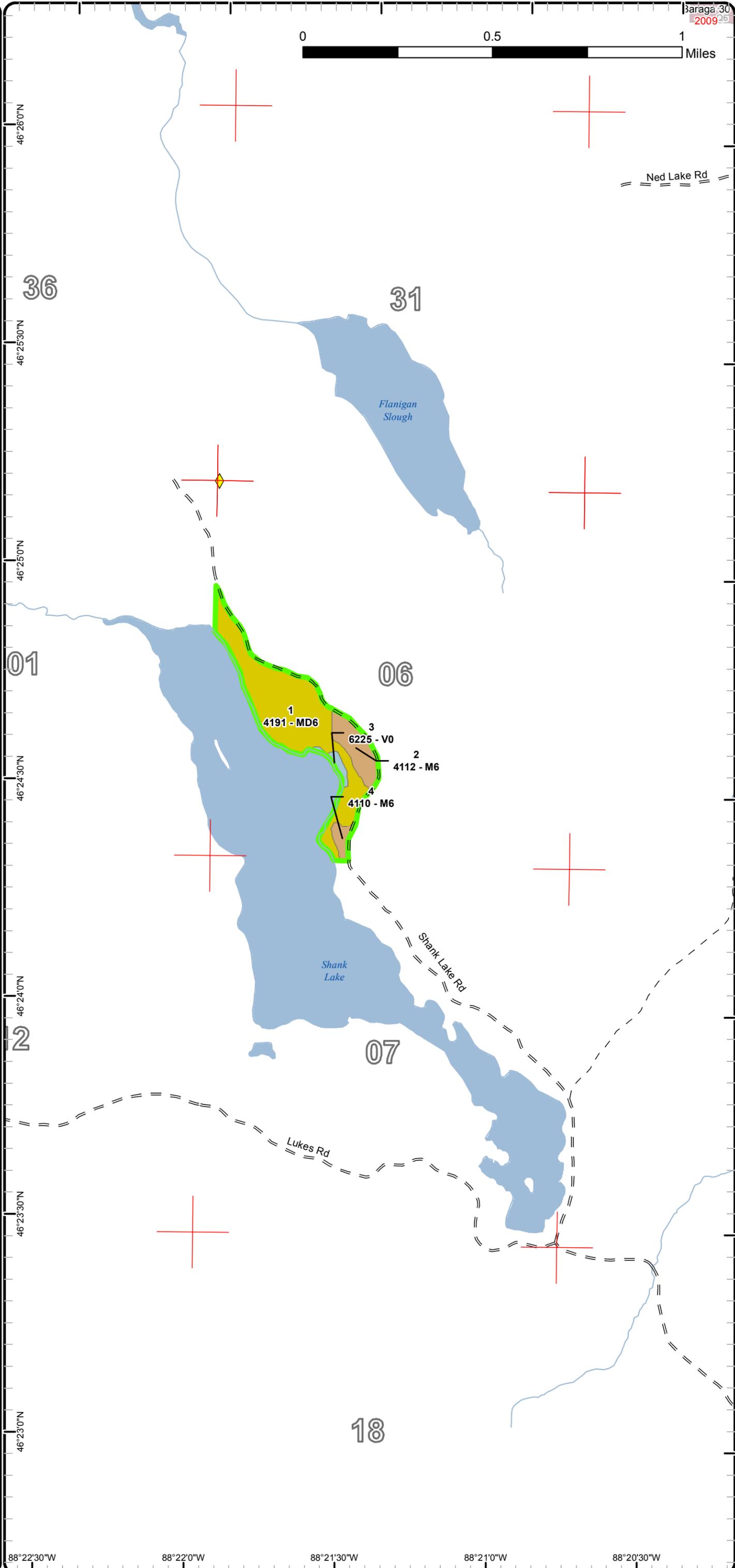
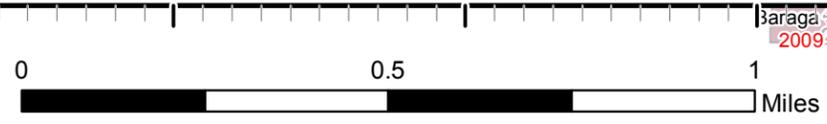
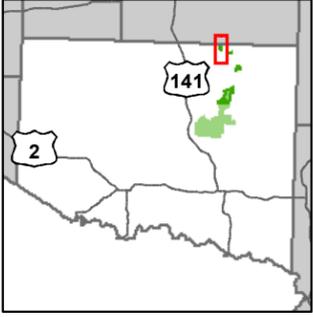


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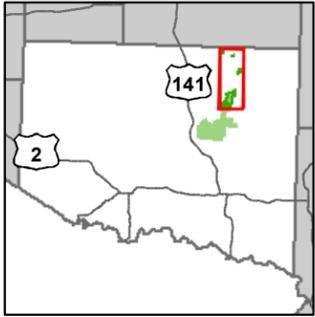


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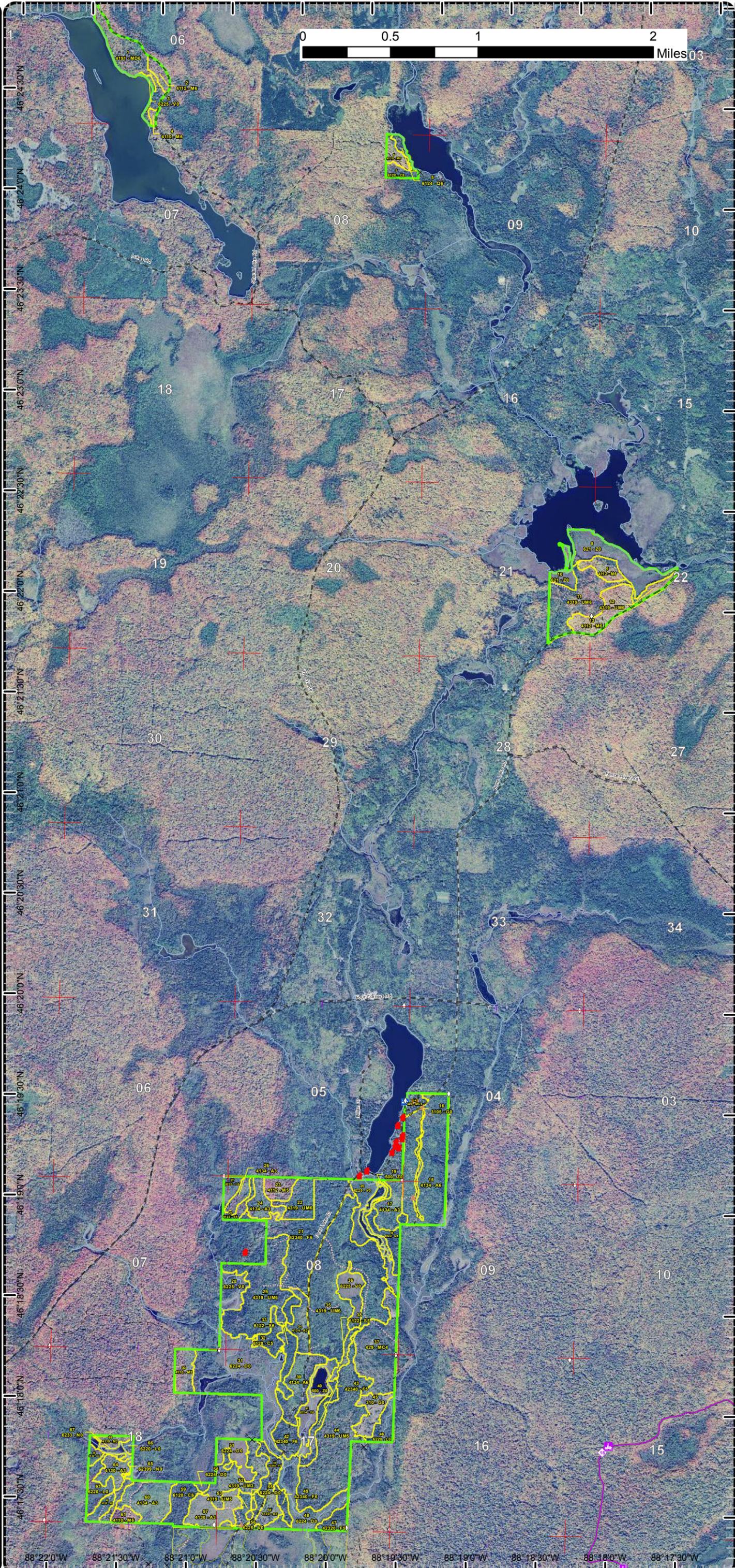
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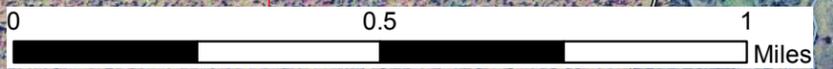
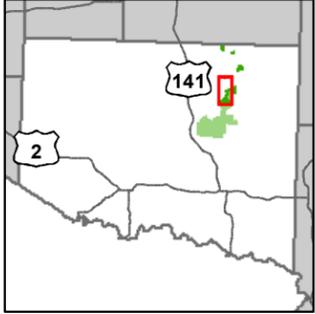


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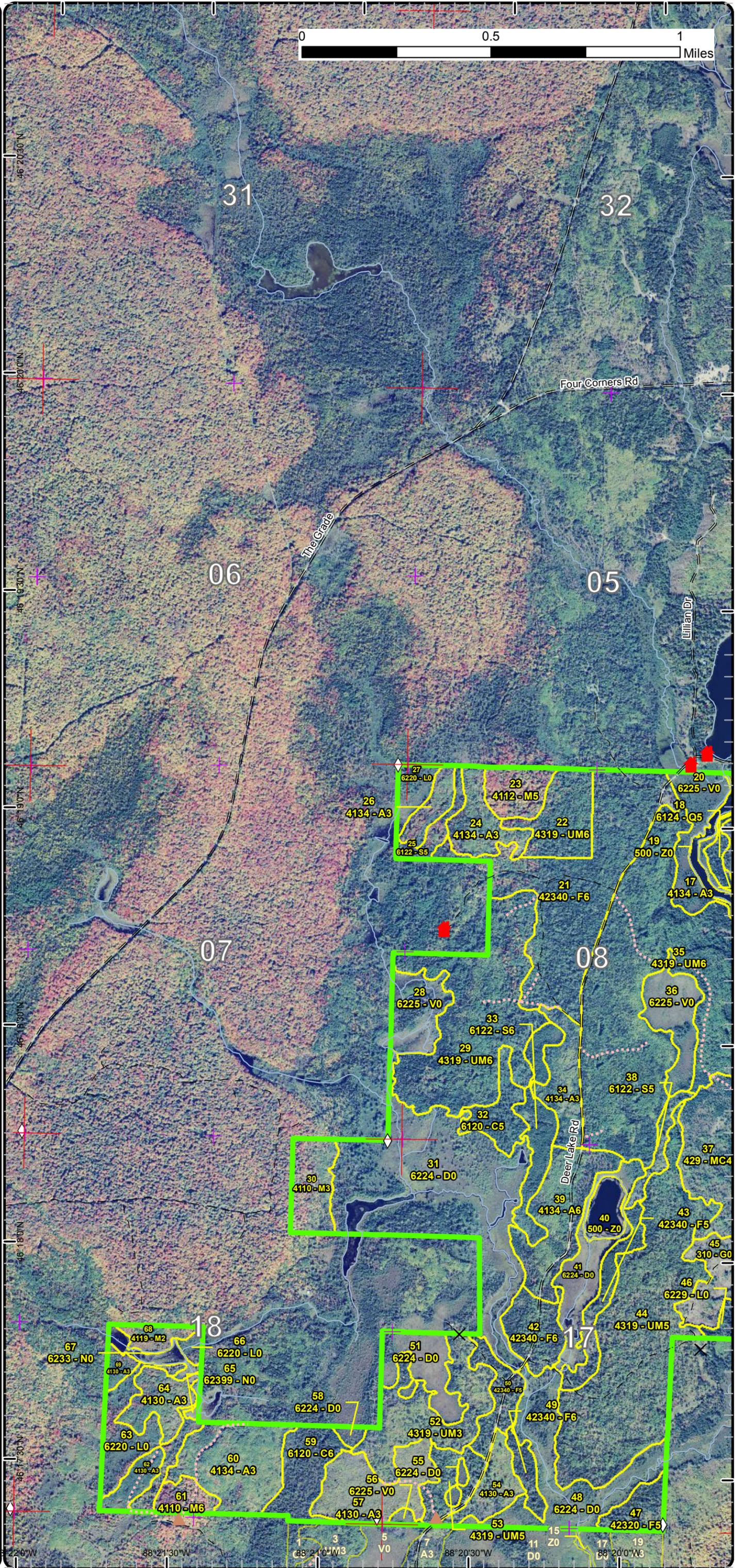


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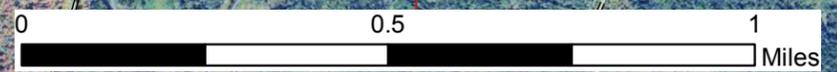
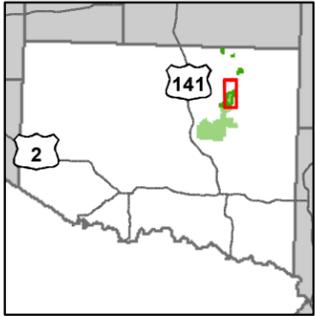


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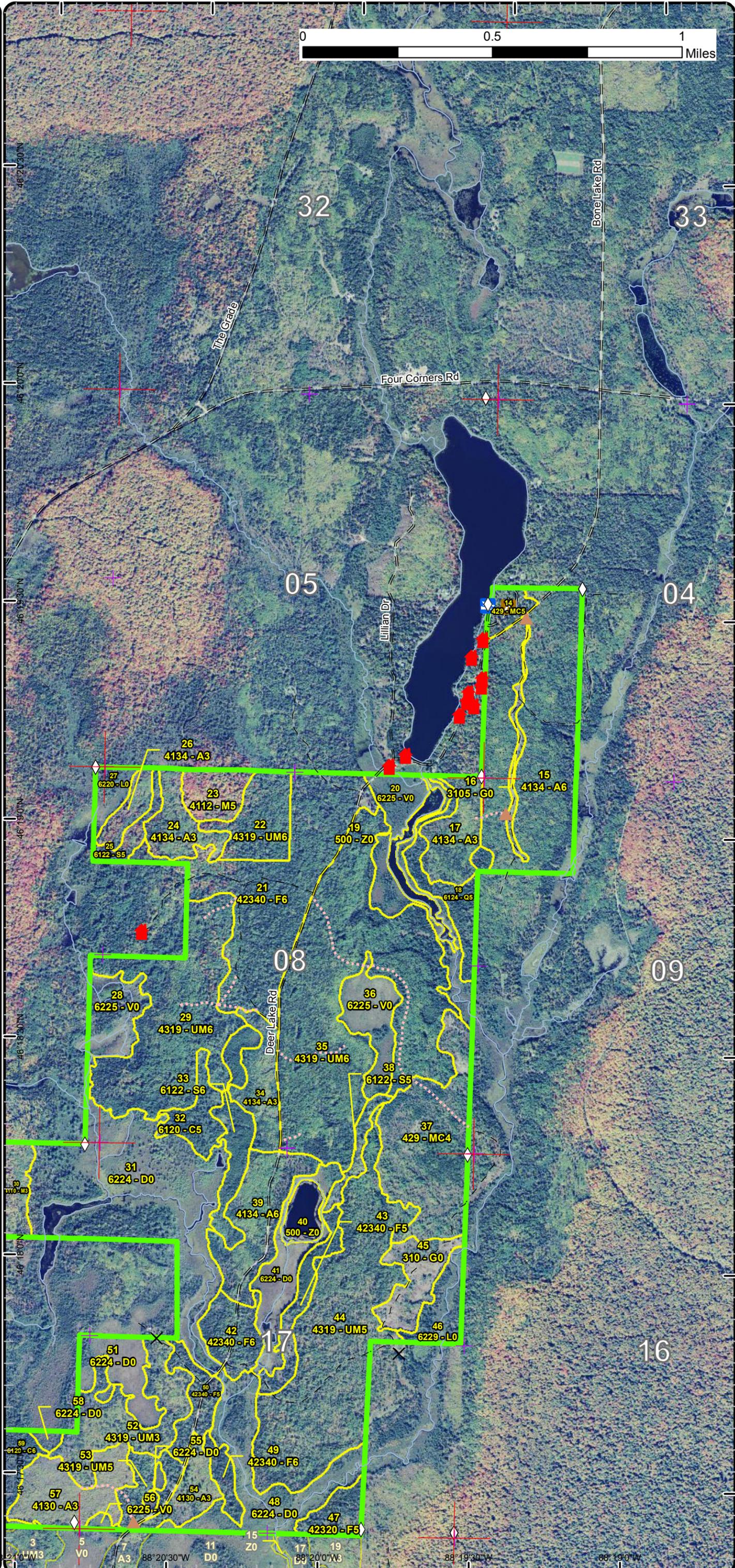


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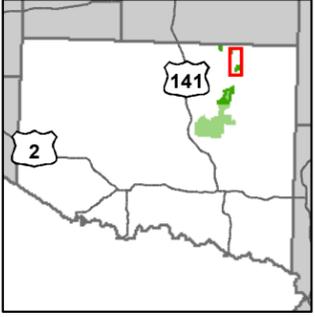


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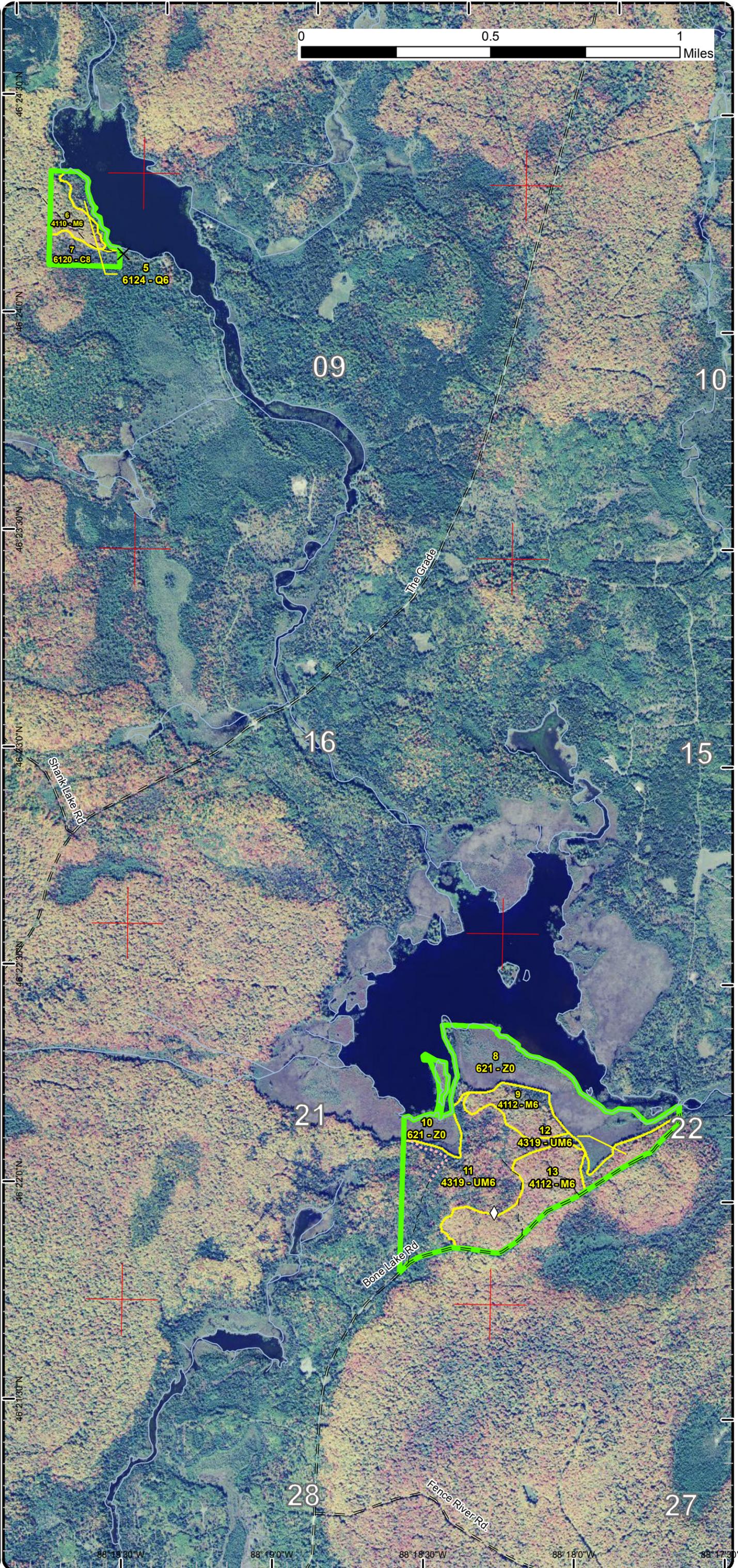


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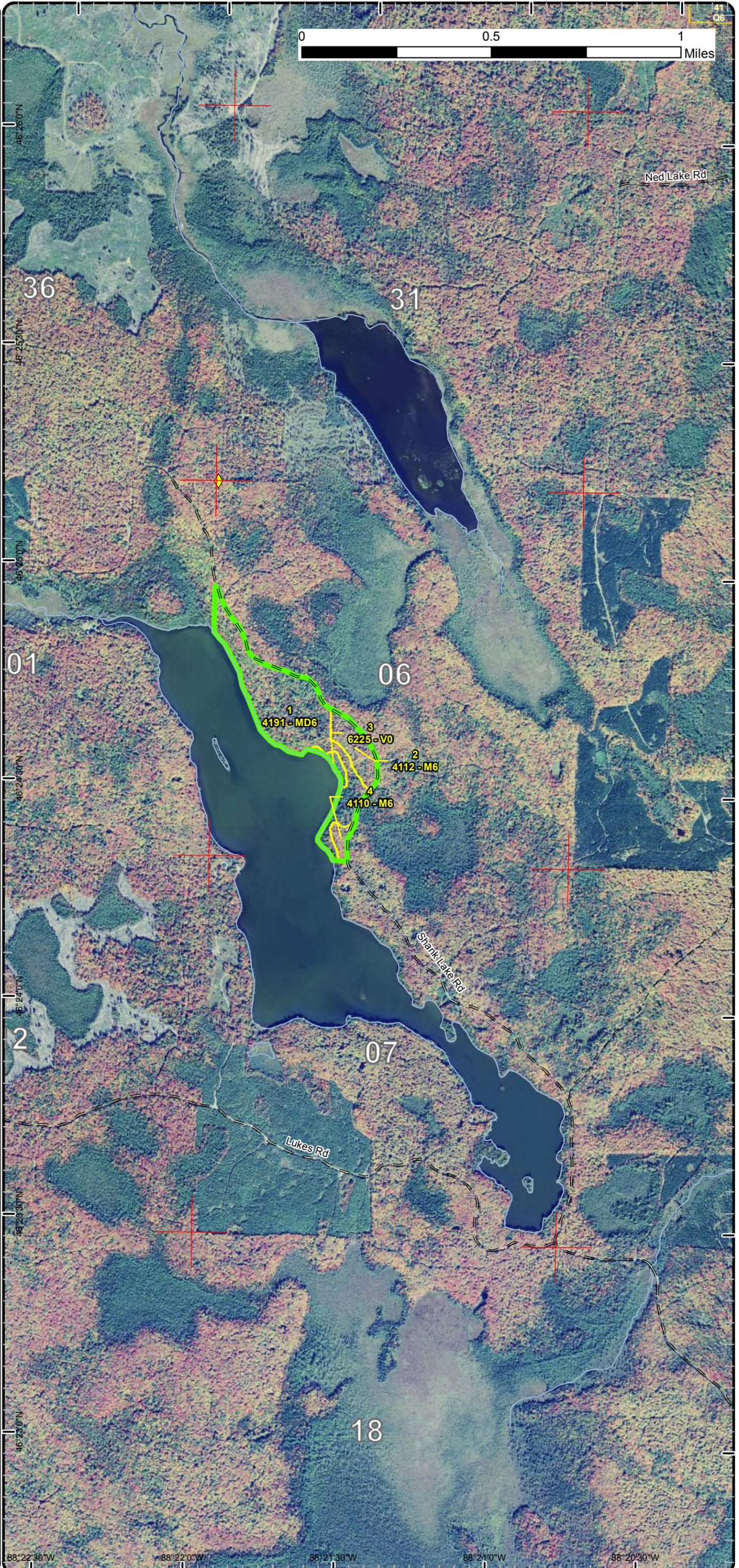
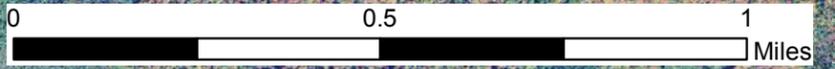
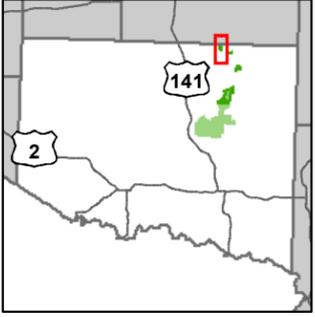


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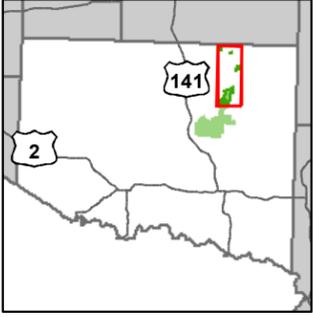
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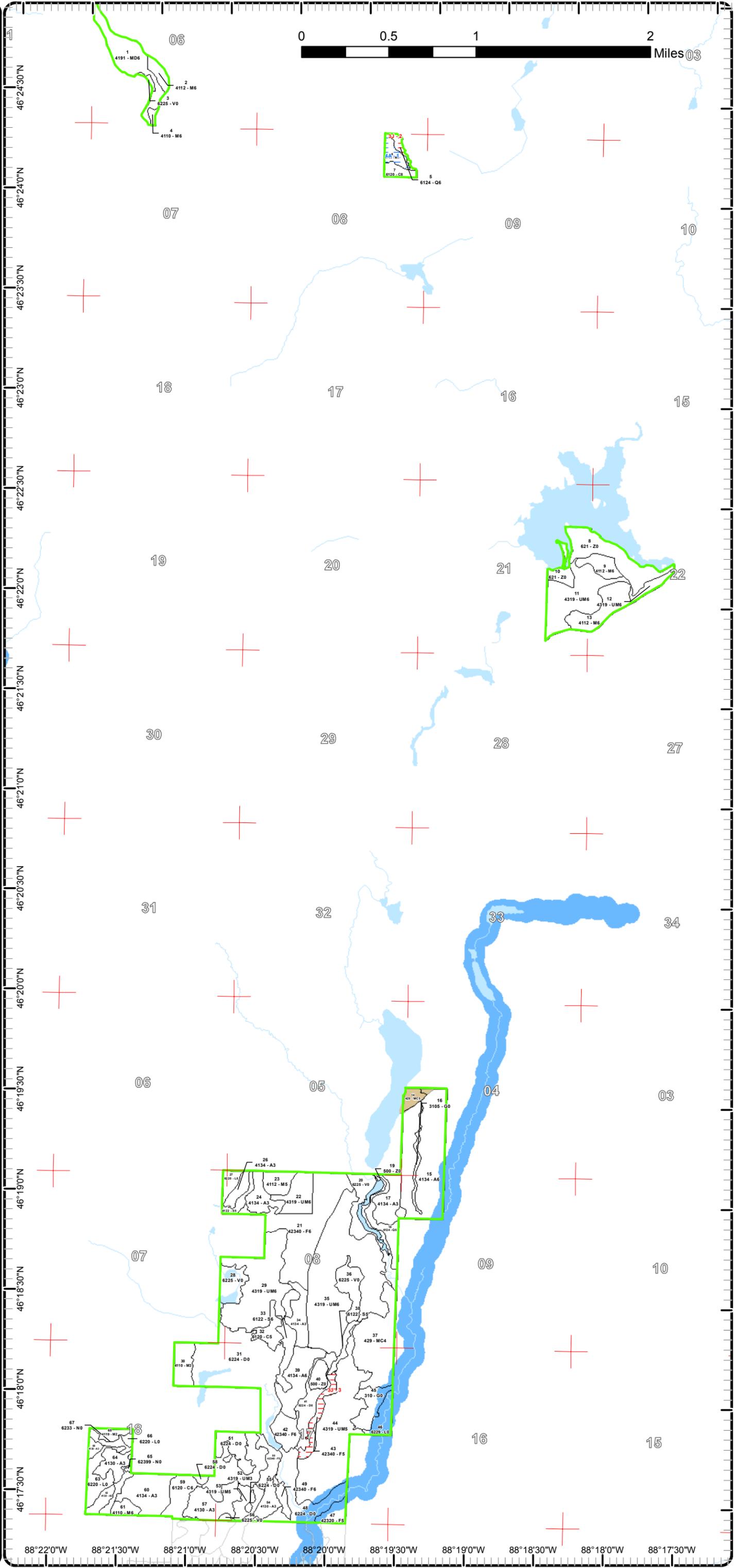
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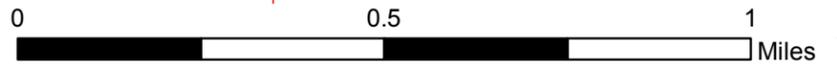
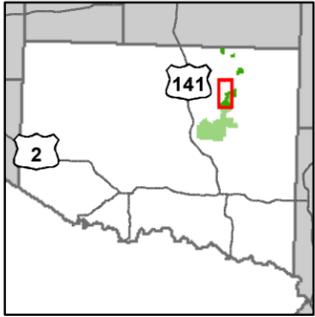


- Miris Corners
- Stand Boundaries
- Site Condition
- Available w/ Constraints
- Unavailable
- Available Factors W/ Constraints
- 4A: No Markets Available for these Forest Products
- Unavailable Factors
- 3J: Water quality / BMPs (stream, river, or lake)
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- State Forest Campground

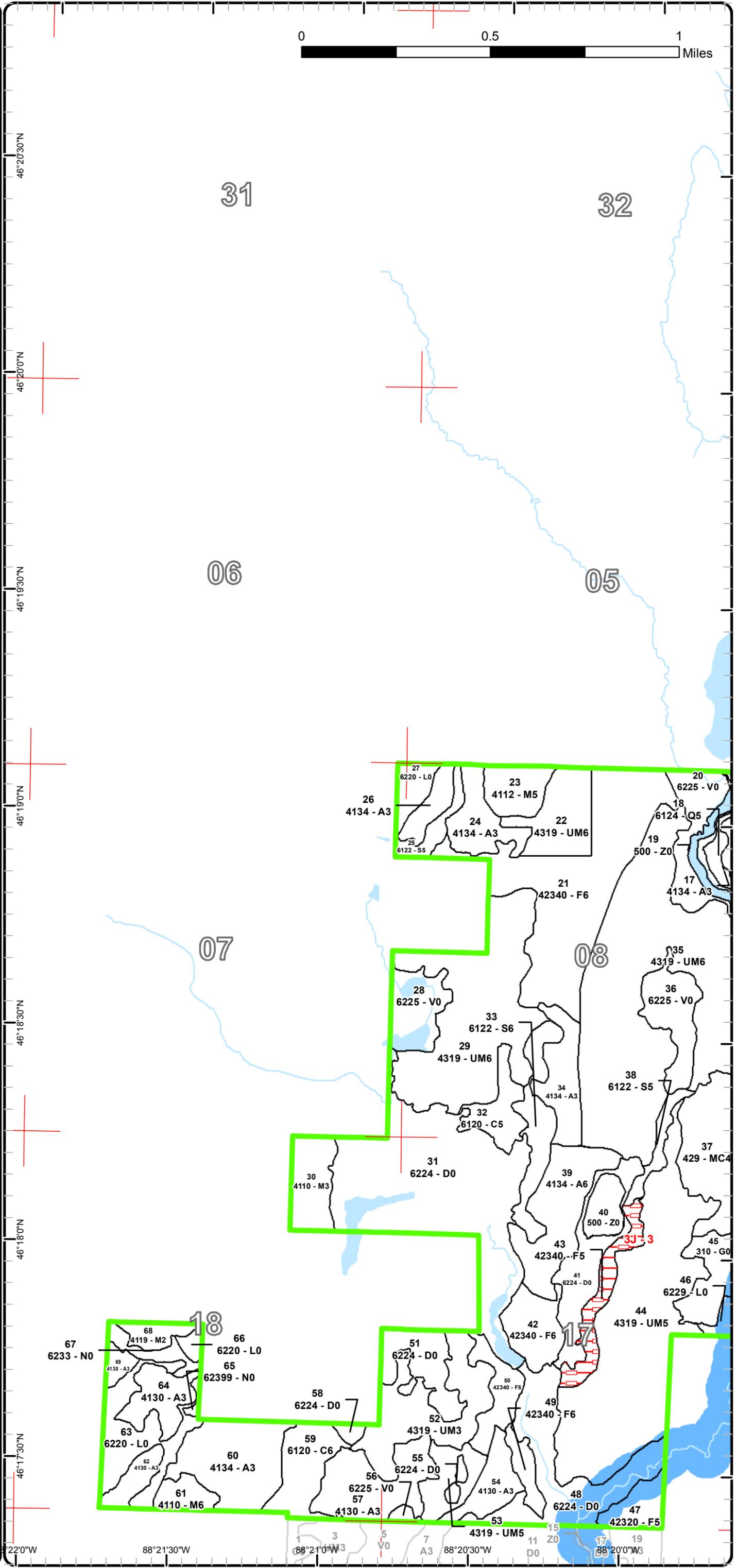


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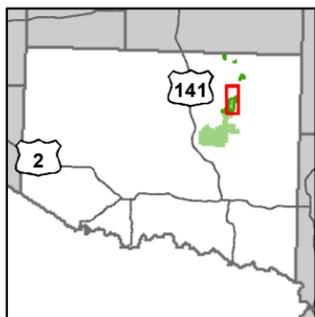
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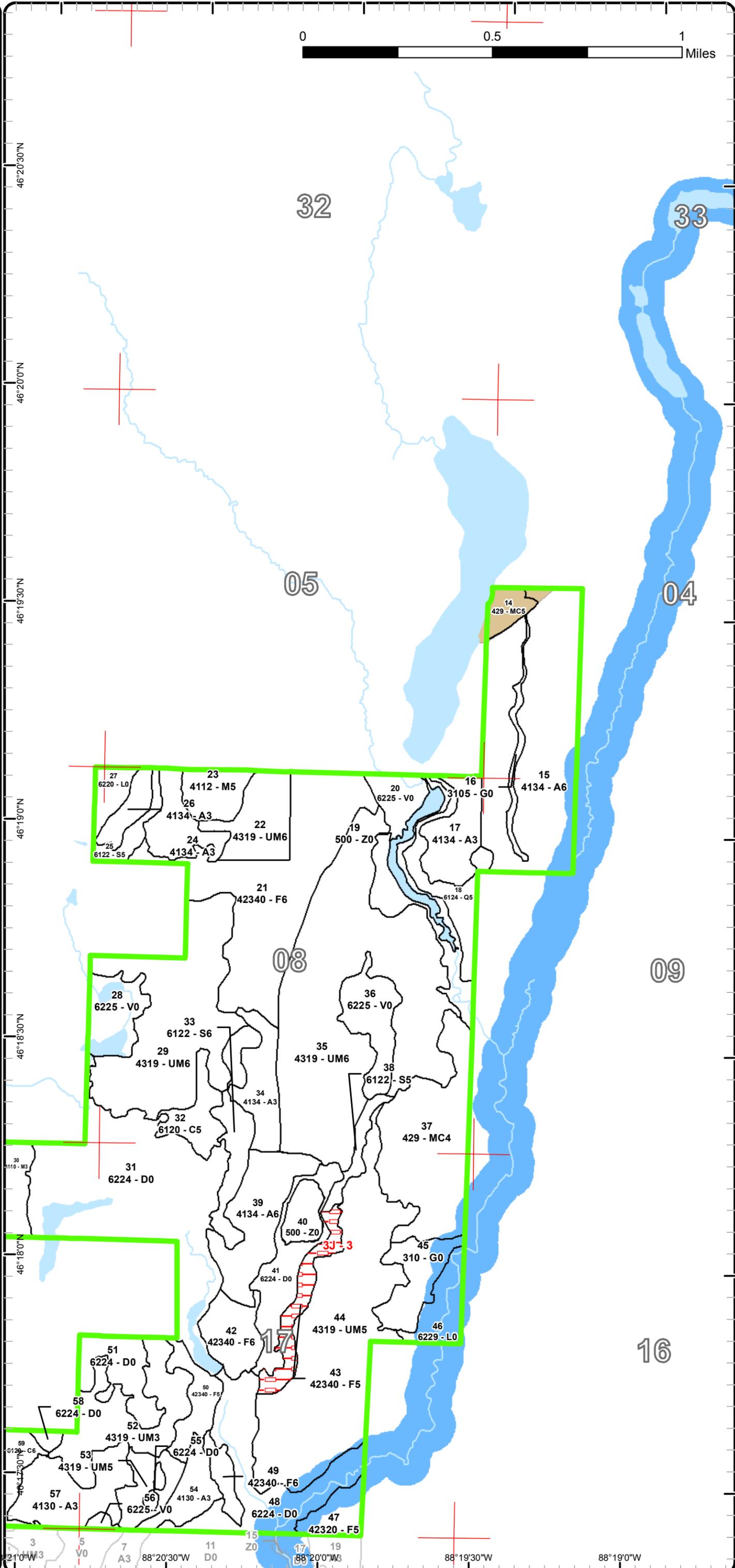
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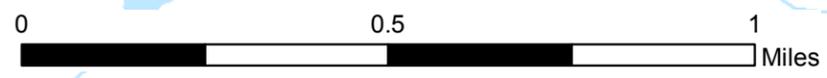
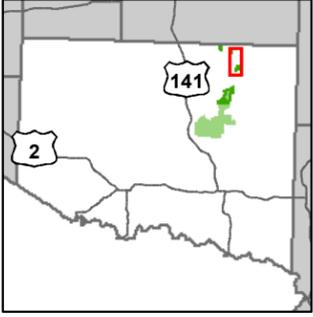


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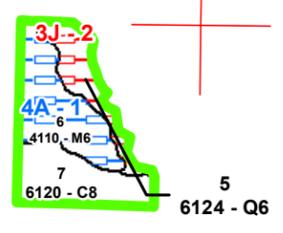
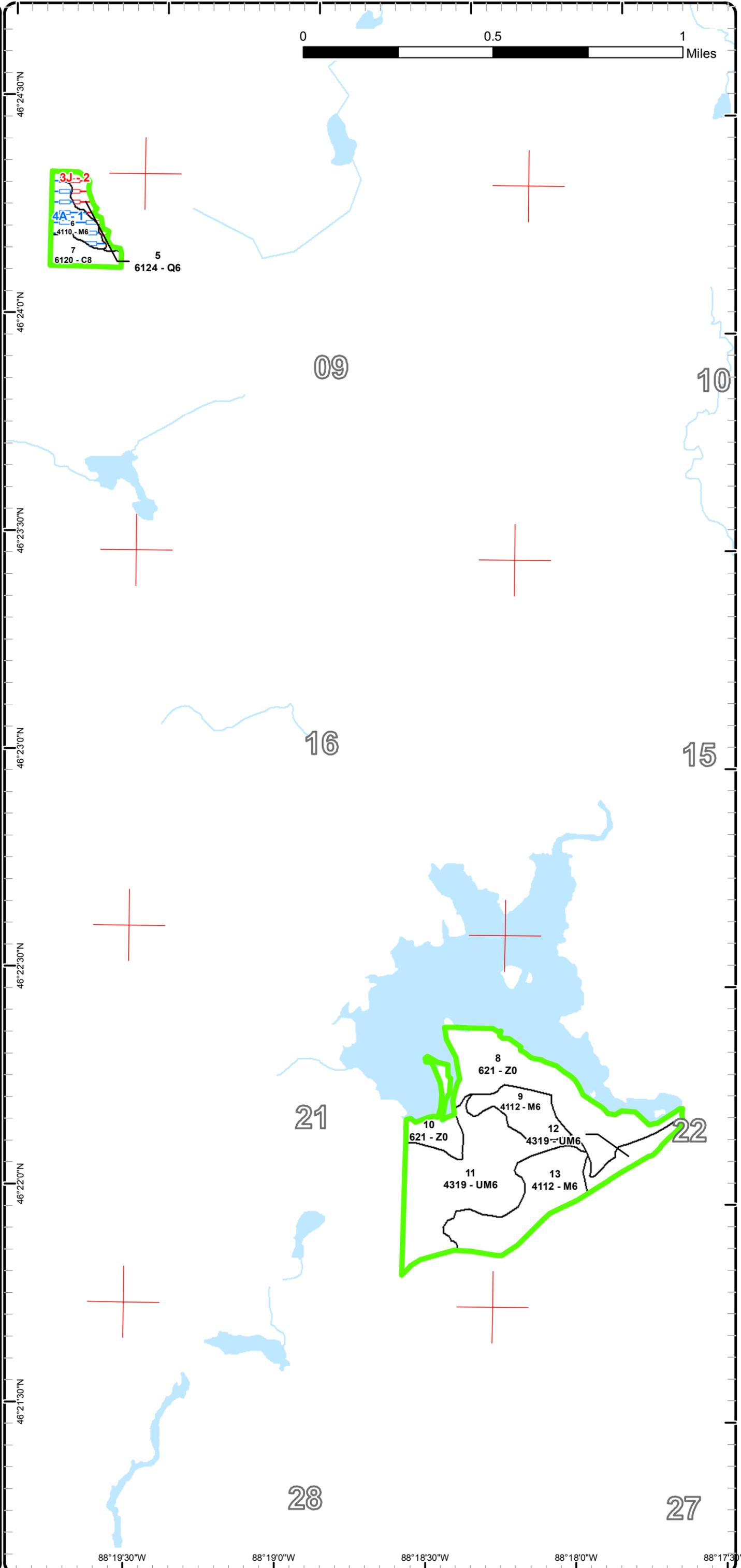


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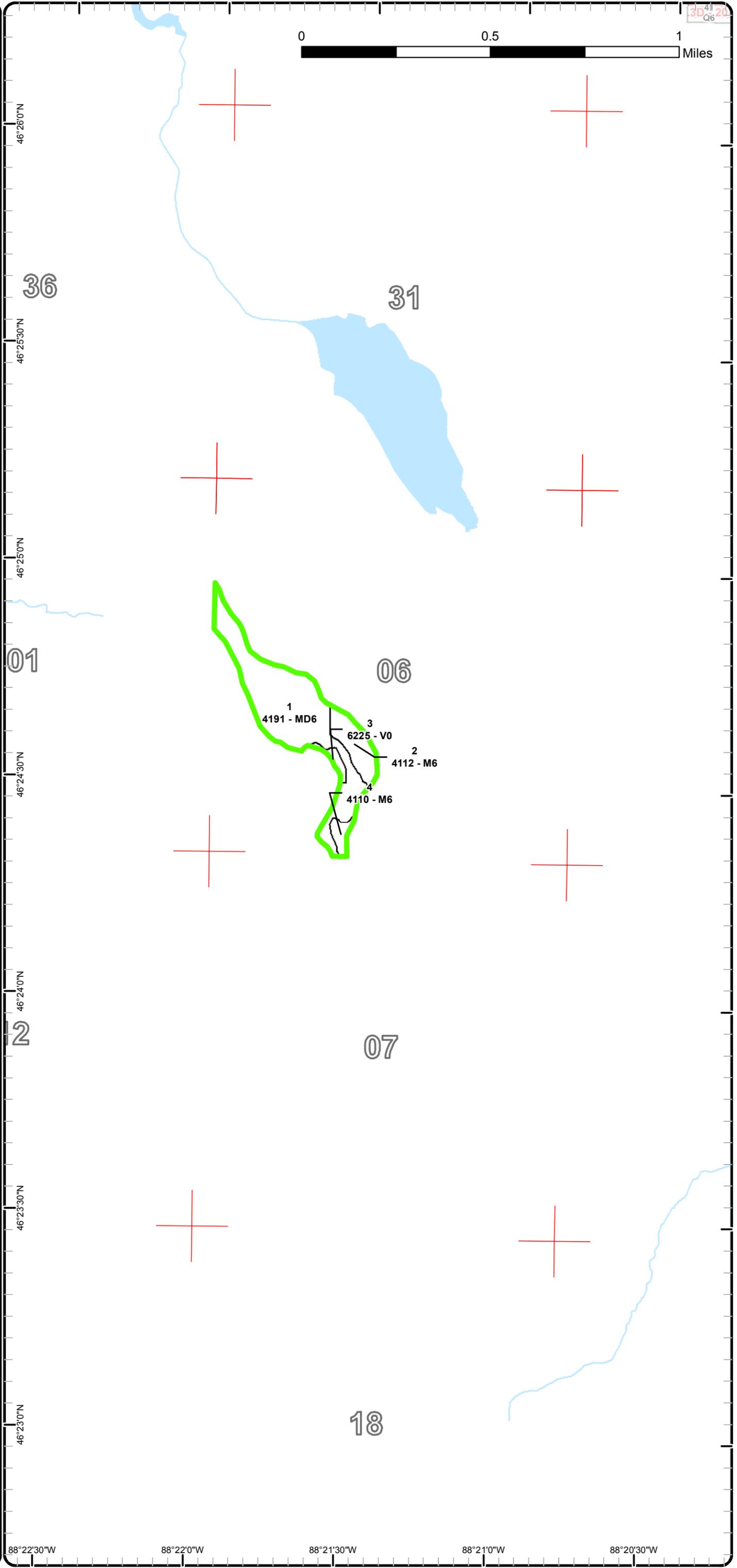
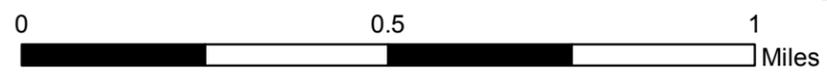
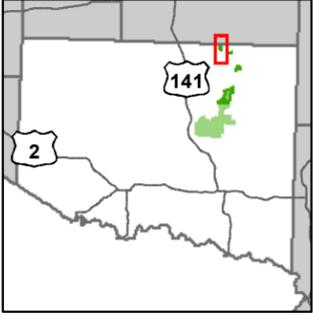


46°24'30"N
 46°24'0"N
 46°23'30"N
 46°23'0"N
 46°22'30"N
 46°22'0"N
 46°21'30"N

88°19'30"W 88°19'0"W 88°18'30"W 88°18'0"W 88°17'30"W

Special Conservation Areas & Site Conditions Map

Compartment: 118
 T45NR32W 04,08-09,17-18
 T46NR32W 21-22,06,08
 County: Iron
 Unit: Crystal Falls
 Mgmt Area: Amasa Plains
 YOE: 2017
 Acres: 1692 GIS Calculated
 Examiner: Ed Rice
 Map Revised: 8/28/2015
 Map Phase: Pre-Review



- Miris Corners
- Stand Boundaries
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes

88°22'30"W 88°22'0"W 88°21'30"W 88°21'0"W 88°20'30"W
 46°26'0"N 46°25'30"N 46°25'0"N 46°24'30"N 46°24'0"N 46°23'30"N 46°23'0"N

Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	43	124	34	4	106	0	0	0	0	0	0	0	0	0	0	0	0	311
Bog	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
Cedar	0	0	0	0	0	0	0	0	0	0	13	8	21	0	0	0	0	0	42
Herbaceous Openland	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Lowland Conifers	0	0	0	0	5	0	0	19	0	0	0	0	0	0	0	0	0	0	24
Lowland Shrub	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
Lowland Spruce/Fir	0	0	0	0	0	0	7	27	0	0	0	0	0	0	0	0	0	0	34
Marsh	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Mixed Upland Deciduous	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	40
Northern Hardwood	0	0	17	7	0	0	0	59	13	0	0	0	0	0	0	0	0	14	110
Treed Bog	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201
Upland Conifers	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	0	0	0	70
Upland Mixed Forest	0	0	38	0	257	22	168	0	0	0	0	0	0	0	0	0	0	0	485
Upland Spruce/Fir	0	0	0	0	17	18	100	13	0	0	0	0	0	0	0	0	0	0	148
Water	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
Total	429	43	179	41	283	216	315	118	13	0	13	8	21	0	0	0	0	14	1693



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2017

Acres of Harvest

Compartment 118
Total Compartment Acres: 1,692

Commercial Harvest - 336
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Upland Conifers	60	0	0	0	0	0	0	7	0	67
Upland Mixed Forest	165	0	0	0	0	0	0	0	0	165
Upland Spruce/Fir	104	0	0	0	0	0	0	0	0	104
Total	329	0	0	0	0	0	0	7	0	336

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	336	0	0	0	0	0	0	0	25	361
Next Step	0	170	170	0	170	0	329	0	0	838
Total	336	170	170	0	170	0	329	0	25	1198



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
11	12118011-Cut	55.5	4319 - Mixed Upland Forest	Poletimber Well	50	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription cut merchantable aspen and r maple. cut spruce/fir 1 stick and larger. leave w pine, r pine, cedar, and hemlock. reserve all lowland areas from
Specs: harvest.

Next Step
Treatments:

Acceptable aspen, spruce, fir
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

14	12118014-Cut	6.9	429 - Mixed Upland Conifers	Poletimber Medium	48	81-110	Harvest	Salvage	429 - Mixed Upland Conifers	Two-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription cut spruce, fir, j pine 2 sticks tall and larger. mark to cut declining w birch. leave w pine, r pine and healthy w birch. avoid as much as possible
Specs: damaging advanced regen.

Next Step
Treatments:

Acceptable
Regen:

Other winter cut due to camping season. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

16	12118016-NF	5.5	3105 - Mixed Upland Herbaceous	Nonstocked	Unspec ified	NonForestMgt	Other - Specify		310 - Herbaceous Openland		Proposal
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Habitat Cut: Yes**Site Condition:**

Prescription Open condition maintained by burning or mechanical treatment.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

21	12118021-Cut	85.3	42340 - Upland Spruce/Fir	Poletimber Well	57	Unspec ified	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription cut merchantable aspen and j pine. cut spruce/fir 2" diameter and larger. leave w pine, r pine, w birch. leave small pockets of conifers with
Specs: associated aspen 10 - 20' diameter spaced approx. every 200 feet.

*monitor summer of 2015 for additional SBW impacts - may need an early entry

Next Step
Treatments:

Acceptable aspen, spruce/fi
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
37	12118037-Cut	59.7	429 - Mixed Upland Conifers	Poletimber Poor	45	Unspec ified	Harvest	Clearcut	4212 - Planted Jack Pine	Even-Aged	Proposal
Habitat Cut: No		Site Condition:									
<u>Prescription</u> cut trees 2" and larger. leave w pine, r pine, w birch. also leave scattered retention pockets including some aspen. reserve during timber sale											
<u>Specs:</u> set up open areas. prescribe burn to reduce slash and kill aspen regen. if pburn does not occur, herbicide with skips (to allow a minor component of aspen regen), trench and plant j pine.											
<u>Next Step</u> Burn, Slash; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(3yr)											
<u>Treatments:</u>											
<u>Acceptable</u> jack pine, w pine, r pine											
<u>Regen:</u>											
<u>Other</u> Old next step comments:											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/1 /2016											
42	12118042-8- New	7.1	42340 - Upland Spruce/Fir	Poletimber Well	35	Unspec ified	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
Habitat Cut: No		Site Condition:									
<u>Prescription</u> cut merchantable aspen and j pine. cut spruce.fir 1 stick and larger. leave conifer patches 10 - 20' diameter approx. every 200 feet. 100 foot											
<u>Specs:</u> bmp buffer to creek/bog											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> aspen, spruce/fir											
<u>Regen:</u>											
<u>Other</u> Old next step comments:											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/1 /2016											
44	12118044-Cut	109.9	4319 - Mixed Upland Forest	Poletimber Medium	51	Unspec ified	Harvest	Clearcut	4212 - Planted Jack Pine	Even-Aged	Proposal
Habitat Cut: No		Site Condition:									
<u>Prescription</u> cut trees 2" and larger. leave w pine, r pine, w birch. also leave scattered retention pockets including some aspen. prescribe burn to reduce											
<u>Specs:</u> slash and kill aspen regen. if pburn does not occur, herbicide with skips (to allow a minor component of aspen regen), trench and plant j pine.											
<u>Next Step</u> Burn, Slash; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(3yr)											
<u>Treatments:</u>											
<u>Acceptable</u> jack pine, w pine, r pine											
<u>Regen:</u>											
<u>Other</u> Old next step comments:											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/1 /2016											
45	12118045-NF	19.1	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Proposal
Habitat Cut: Yes		Site Condition:									
<u>Prescription</u> Open condition maintained by burning or mechanical treatment.											
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u>											
<u>Regen:</u>											
<u>Other</u> Old next step comments:											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/1 /2016											



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
50 12118050-Cut	11.6	42340 - Upland Spruce/Fir	Poletimber Medium	62	Unspecified	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription cut merchantable aspen and j pine. cut spruce/fir 2" and larger. leave approx. 10 - 20 foot diameter patches approx. every 200 feet. leave w
Specs: pine, r pine
 use 150 foot bmp buffer to Camp Creek

Next Step
Treatments:

Acceptable aspen, spruce, fir
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

Total Treatment
Acreage Proposed: 360.6

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 118

Year of Entry: 2017

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	4A	3J
		With Condition	Not Available			
311	311	0	0	Aspen		
74	74	0	0	Bog		
42	42	0	0	Cedar		
25	25	0	0	Herbaceous Openland		
23	19	0	5	Lowland Conifers		5
51	51	0	0	Lowland Shrub		
34	34	0	0	Lowland Spruce/Fir		
7	7	0	0	Marsh		
40	40	0	0	Mixed Upland Deciduous		
110	101	9	0	Northern Hardwood	9	
201	201	0	0	Treed Bog		
70	70	0	0	Upland Conifers		
485	485	0	0	Upland Mixed Forest		
148	133	0	15	Upland Spruce/Fir		15
71	71	0	0	Water		
1,692	1,664	9	19	Total Forested Acres	9	19
	98%	1%	1%	Relative Percent		

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	4A: No Markets Available for these Forest Products	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: small acreage and low volume for timber sale in this remote stand. potential to set up with stands near Shank Lk. next inventory cycle.							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 118

Year of Entry: 2017

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area
 HCVA = High Conservation Value Area
 SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Crystal Falls Mgt. Unit		Report 8 – Forested Stands			Compartment: 118 Year of Entry: 2017
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	39.5	55	51-80	mixed stand. large w pine 24" dbh +. R maple is low quality, stand interspersed with low ground pockets holding tag alder and minor amounts of cedar. Hemlock groves scattered throughout, especially towards the N end of stand.
2	4112 - Maple, Beech, Cherry Association	Poletimber Well	8.2	61	81-110	scattered large hemlock 24" +. S end of stand heavier to h maple saplings.
4	4110 - Sugar Maple Association	Poletimber Well	2.6	64	81-110	well formed h maple poletimber and small sawtimber 6 - 12" dbh. widely scattered h maple saplings. minor component of upland cedar.
5	6124 - Lowland Spruce-Fir	Poletimber Well	4.7	30	Immature	S end of stand is a narrow strip of high ground along Bone Lake. as stand progresses N, it transitions to lowland conifer with scattered high ground knolls. - multiple springs and drainages in the lake.
6	4110 - Sugar Maple Association	Poletimber Well	8.9	61	111-140	very scattered upland cedar. good h maple saplings. areas of highly stocked poletimber. Due to small isolated acreage, hold for management until stands 1 and 2 are thinned.
7	6120 - Lowland Cedar	Sawtimber Medium	7.7	105	Unspecified	interspersed open tag alder areas within the stand. no evidence of wintering deer.
9	4112 - Maple, Beech, Cherry Association	Poletimber Well	14.0	61	81-110	very N edge of stand has transitional conifers - spruce/fir 4-8" dbh.
11	4319 - Mixed Upland Forest	Poletimber Well	55.5	50	81-110	small strips and pockets of lowland interspersed throughout stand with tag alder and b ash - very wet. N end of stand transitions to heavier stocking of fir saplings and poletimber 4 - 6" dbh. small r maple M6 inclusion in W center of stand.
12	4319 - Mixed Upland Forest	Poletimber Well	8.8	40	81-110	aspen 7 - 10" dbh with scattered 12" trees. associated r maple low quality. scattered 8" dbh fir. small M6 inclusion in center of stand
13	4112 - Maple, Beech, Cherry Association	Poletimber Well	31.3	62	81-110	good h maple regen. scattered rock knobs
14	429 - Mixed Upland Conifers	Poletimber Medium	6.9	48	81-110	Deer Lake campground. good aspen sapling understory from previous cut. well formed r pine. SBW on spruce/fir. dead tops on some of the w birch.
15	4134 - Aspen, Spruce/Fir	Poletimber Well	105.9	40	Unspecified	aspen 4 - 7' dbh with scattered 8" trees. very dense fir saplings/small poletimber. midway along E side, inclusion with higher stocking of upland b spruce saplings/small poletimber. SBW damaged tips. sand ground aspen - more suited towards pine.
17	4134 - Aspen, Spruce/Fir	Sapling Well	20.6	16	Immature	good mix of aspen and conifer. spruce/fir pockets of poletimber 6 - 8" dbh



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	6124 - Lowland Spruce-Fir	Poletimber Medium	18.8	62	Unspecified	very scattered aspen - cut off from past beaver activity. lowlands adjacent to the Deer River with more upland in E part of stand
21	42340 - Upland Spruce/Fir	Poletimber Well	85.3	57	Unspecified	extremely dense fir understory. SBW throughout - large w spruce being impacted heavily. Aspen 6 - 8" dbh with very scattered 10" trees. scattered areas of younger aspen (approx. 35 yrs old) along the W side. Areas throughout the stand heavily stocked to F6.
22	4319 - Mixed Upland Forest	Poletimber Well	22.9	39	81-110	very dense spruce/fir
23	4112 - Maple, Beech, Cherry Association	Poletimber Medium	13.3	72	81-110	low quality r maple with scattered h maple poletimber. scattered aspen 12 - 16" dbh. w birch in fair - good condition. center of stand has rock knobs.
24	4134 - Aspen, Spruce/Fir	Sapling Well	17.0	15	Immature	Aspen saplings with pockets of fir. W. edge heavier to spruce/fir. small pockets of tag alder with rock knobs throughout.
25	6122 - Black Spruce	Poletimber Medium	7.2	65	Unspecified	B spruce drainage with scattered openings of tag alder. B spruce 4 - 7" dbh
26	4134 - Aspen, Spruce/Fir	Sapling Well	8.6	15	Immature	
29	4319 - Mixed Upland Forest	Poletimber Well	82.9	37	81-110	
30	4110 - Sugar Maple Association	Sapling Well	17.3	15	Immature	very W edge has M9 with h maple and b cherry regen as stand transitions to more open sapling stand. Aspen/w spruce overstory has completely fallen out. Fantastic h maple sapling regen - scattered stems nearing 1 stick poletimber
32	6120 - Lowland Cedar	Poletimber Medium	13.5	95	Unspecified	small pockets of b spruce scattered throughout. stand mainly consists of cedar with interspersed open areas having tag alder
33	6122 - Black Spruce	Poletimber Well	20.3	60	Unspecified	good typical b spruce swamp - high stocking quickly transitions to lower quality bog soils. small amounts of cedar in the SW. small inclusion of purer tamarack 4 - 7" dbh in S end
34	4134 - Aspen, Spruce/Fir	Sapling Well	18.9	17	Immature	very dense fir sapling regen. r pine saplings mainly in old landing areas. very widely scattered w birch saplings
35	4319 - Mixed Upland Forest	Poletimber Well	150.7	36	81-110	stand cut in 1979 - extremely dense spruce/fir sapling understory - too dense. Aspen is 3 - 8" dbh with scattered 10 - 12" trees. areas purer to spruce/fir poletimber throughout. SBW affected stand summer 2014.
37	429 - Mixed Upland Conifers	Poletimber Poor	63.3	45	Unspecified	off site, sand ground aspen. Aspen very low quality, roughly 1 -3 sticks tall. open grown w spruce with upland b spruce and j pine. NW end heavier to upland b spruce, w spruce and j pine. Nice j pine along NE end 4 - 5 sticks tall. stand is semi open.



Stand	Crystal Falls Mgt. Unit		Report 8 – Forested Stands			Compartment: 118 Year of Entry: 2017	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
38	6122 - Black Spruce	Poletimber Medium	6.7	57	Unspecified	pockets of purer tamarack. scattered areas of poorly stocked/open areas with spruce/fir saplings and tag alder. b spruce 3 - 7" dbh	
39	4134 - Aspen, Spruce/Fir	Poletimber Well	34.0	28	Immature		
42	42340 - Upland Spruce/Fir	Poletimber Well	16.8	35	Unspecified	very dense fir understory. Aspen 4 - 7" dbh. high percentage of conifers at edges of the stand with larger trees along the road. small pockets of larger diameters E of Deer Lk. Rd. SBW on tops from 2014.	
43	42340 - Upland Spruce/Fir	Poletimber Medium	14.7	51	Unspecified	good upland b spruce, w spruce and fir. scattered areas of windthrow from 2005 along adjacent bog edge. small inclusion of r pine along bog pond. scattered w pine throughout the stand. good transition/buffer to swamp.	
44	4319 - Mixed Upland Forest	Poletimber Medium	113.0	51	Unspecified	off site aspen 3 - 4 sticks tall, 5 - 8" dbh with component of 10 - 12" trees. scattered w pine with slight amounts of r pine. pockets of A3 throughout - regen from 2005 windthrow scattered, low quality w birch. overall stand lightly hit in 2014 by SBW - large w spruce was hit hard however. Areas of semi open.	
47	42320 - Upland Spruce	Poletimber Medium	10.7	42	Unspecified	edges towards river transition to lowland conifers and tag alder. mainly a spruce/fir stand. S 1/4 was cut with comp 119 in the past.	
49	42340 - Upland Spruce/Fir	Poletimber Well	7.0	49	Unspecified	thick spruce/fir in E "peninsula" with scattered w pine 8 - 14" dbh. some old windthrow pockets from 2005. small inclusions of lowland b spruce 6 - 8" dbh with tag alder/sphagnum. transition area from lowland to upland.	
50	42340 - Upland Spruce/Fir	Poletimber Medium	13.5	62	Unspecified	very dense spruce/fir. Aspen 8 - 12" dbh , low quality for its age. scattered large w spruce - has top kill from SBW. w pine dispersed throughout - likely was once a w pine stand. very small component of w birch poletimber 6 - 8"dbh. Areas of fairly open from 2005 windthrow - most of truly mature aspen in the stand is gone.	
52	4319 - Mixed Upland Forest	Sapling Well	38.3	15	Immature	A3 1 - 2" dbh with high percentage of fir saplings. good aspen regeneration. buffer was left along NW edge to open bog - b spruce, aspen poletimber with small bog inclusion.	
53	4319 - Mixed Upland Forest	Poletimber Medium	12.9	45	81-110	Aspen 4 - 5 sticks tall. fir saplings showing SBW on tops. scattered w pine and r pine throughout. very dense fir understory.	
54	4130 - Aspen	Sapling Well	13.5	9	Immature		
57	4130 - Aspen	Sapling Well	29.8	9	Immature	almost pure aspen stand. old (2005) windthrow at edges. stand cut in 2006 due to heavy windthrow in 2005	

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Crystal Falls Mgt. Unit

Report 8 – Forested Stands

Compartment: 118
Year of Entry: 2017

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
59	6120 - Lowland Cedar	Poletimber Well	20.6	110	Unspecified	NE portion of stand has good S6 poletimber 5 - 7" dbh. remainder of stand is cedar with tag alder and interspersed openings. no winter deer usage 1/15/15
60	4134 - Aspen, Spruce/Fir	Sapling Well	35.9	16	Immature	scattered spruce/fir throughout. tag alder in low areas.
61	4110 - Sugar Maple Association	Poletimber Well	7.9	64	Unspecified	pockets of very good H maple sapling regen 5 - 10' tall. scattered log sized h maple - defect prevalent. widely scattered upland cedar and w pine. very SW corner of stand has small aspen inclusion 3 - 4" dbh trees.
62	4130 - Aspen	Sapling Well	8.1	16	Immature	Aspen 2 - 3" dbh. scattered clumps and single trees of fir throughout. tag alder along edges and in scattered low areas within stand.
64	4130 - Aspen	Sapling Well	15.2	16	Immature	small rock outcrops throughout. tag alder areas at bases and below outcrops. small fir dispersed throughout stand.
68	4119 - Mixed Northern Hardwoods	Sapling Medium	6.6	25	Immature	stand clearcut in past. good h maple regen from single stems and stump sprouts
69	4130 - Aspen	Sapling Well	3.9	34	Immature	very small amount of 1 stick aspen throughout. move conifer along E edge



Stand	Cover Type	Acres	Managed Site	General Comments:
3	6225 - Bog	1.8	No	tag alder/bog along Shank Lake
8	621 - Floating Aquatic	44.0	No	floating leatherleaf bog adjacent to Bone Lake. scattered, stunted b spruce
10	621 - Floating Aquatic	9.7	No	floating leatherleaf bog with scattered b spruce
16	3105 - Mixed Upland Herbaceous	5.5	Yes	old hunter walking trail - edges in places growing into fir, spruce and w pine. has a berm out at Deer Lk Rd but 4 wheelers have been driving over regularly.
19	500 - Water	8.5	No	Deer River slough as river comes out of Deer Lk.
20	6225 - Bog	32.0	No	open bog - leatherleaf with areas heavier to tag alder/willow. scattered stunted b spruce.
27	6220 - Alder/willow	7.7	No	tag alder/willow into bog drainage. N end has small patch of cedar, tamarack, b ash.
28	6225 - Bog	18.1	No	leatherleaf bog with flooded areas
31	6224 - Treed Bog	110.9	No	large bog complex with multiple drainages and old beaver meadows. flooded in many areas. scattered pockets of b spruce and tamarack. associated tag alder
36	6225 - Bog	20.4	No	open leatherleaf bog with stunted b spruce saplings
40	500 - Water	9.2	No	small pond
41	6224 - Treed Bog	23.0	No	open marsh/bog. leatherleaf and swamp grass. creek drainage throughout stand with old beaver meadows
45	310 - Herbaceous Openland	19.1	No	open field with aspen pockets and hazel. spruce saplings encroaching. bracken, grass and sweet fern.
46	6229 - Mixed lowland shrub	14.5	No	lowlands/floodplain adjacent to Deer River. swamp grass, tag alder. adjacent uplands to the E has spruce/fir/aspens. 1/21/15: winter deer use.
48	6224 - Treed Bog	44.1	No	open, sparsely treed leatherleaf bog. drainages throughout. scattered, stunted tamarack and b spruce
51	6224 - Treed Bog	18.7	No	open marsh/bog. leatherleaf with stunted tamarack and b spruce



Stand	Cover Type	Acres	Managed Site	General Comments:
55	6224 - Treed Bog	2.1	No	small leatherleaf bog with scattered b spruce
56	6225 - Bog	1.8	No	leatherleaf bog with scattered b spruce - very wet
58	6224 - Treed Bog	2.1	No	stunted b spruce saplings 2 - 3" dbh in wet leatherleaf bog
63	6220 - Alder/willow	25.8	No	tag alder with associated b spruce and fir poletimber. slight b ash component. multiple drainages throughout. SW finger of stand has higher stocking of cedar and b ash.
65	62399 - Marsh (OI)	0.7	No	swamp grass opening ringed with tag alder
66	6220 - Alder/willow	2.7	No	old beaver pond overgrown with tag alder
67	6233 - Wet Meadow	6.4	No	old beaver meadow ringed by b spruce, fir, tag alder